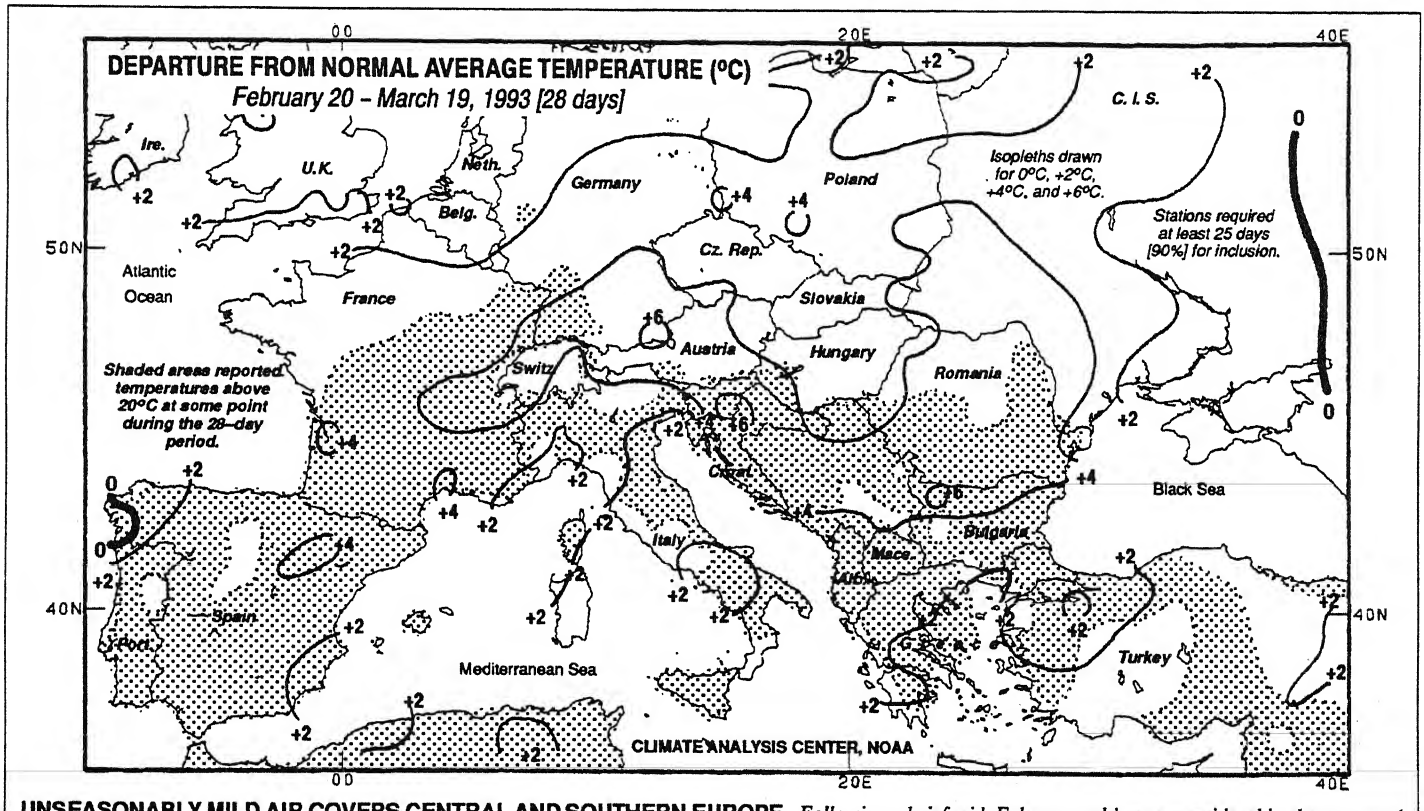
CONTAINS:

FEBRUARY 1994 AND DEC – FEB (1993 – 1994) GLOBAL CLIMATE ANOMALIES

CLIMATE ANALYSIS CENTER

WEEKLY CLIMATE BULLETIN

No. 94/12 **Washington, DC** **March 23, 1994**



UNSEASONABLY MILD AIR COVERS CENTRAL AND SOUTHERN EUROPE. *Following a brief mid–February cold snap, considerably above normal temperatures were observed across the southern two–thirds of the continent for the ensuing month, with highs of 20°C or greater reported as far north as northeastern France and west–central Germany. Temperatures averaged over 4°C above normal for the 28–day period in parts of northeastern Spain, at a few locations in southern and western France, in portions of southwestern Poland, and through a large swath covering east–central France, much of Switzerland and Austria, southwestern Hungary, most of former Yugoslavia north of Macedonia, Romania, Moldova, and the extreme western Ukraine. Except for the mid–February cold spell, warmer than normal conditions have dominated Europe south of Scandinavia since early December. Temperatures averaged over 4°C above normal for the period December 6, 1993 – March 19, 1994 [105 days] in parts of Austria, Poland, former Yugoslavia, Bulgaria, northern Italy, and Romania, with departures reaching +5°C in the latter country.*

UNITED STATES DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL WEATHER SERVICE–NATIONAL METEOROLOGICAL CENTER

CLIMATE ANALYSIS CENTER

WEEKLY CLIMATE BULLETIN

This Bulletin is issued weekly by the Climate Analysis Center and is designed to indicate, in a brief concise format, current surface climatic conditions in the United States and around the world. The Bulletin contains:

- Highlights of major climatic events and anomalies.
- U.S. climatic conditions for the previous week.
- U.S. apparent temperatures (summer) or wind chill (winter).
- Global two–week temperature anomalies.
- Global four–week precipitation anomalies.
- Global monthly temperature and precipitation anomalies.
- Global three–month precipitation anomalies (once a month).
- Global three–month temperature anomalies (once a month).
- Global twelve–month precipitation anomalies (every three months).
- Global twelve–month temperature anomalies (every three months).
- Special climate summaries, explanations, etc. (as appropriate).

Most analyses contained in this Bulletin are based on preliminary, unchecked data received at the Climate Analysis Center via the Global Telecommunications System. Similar analyses based on final, checked data are likely to differ to some extent from those presented here.

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GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF MARCH 19, 1994

1. East–Central North America:

WET WEATHER EASES.

Less than 20 mm of precipitation fell on most of the region; however, amounts of 30 to 40 mm were measured in parts of western New York and northwestern Pennsylvania. Six–week moisture surpluses declined at most locations, approaching 140 mm in portions of Virginia, West Virginia, and eastern Canada [WET – Ending at 7 weeks].

2. Central South America:

HIGH TEMPERATURES PERSIST, BUT RAINS ALLAY RECENT DRYNESS.

Temperatures averaged as much as 5°C above normal, and highs exceeded 38°C at scattered locations [WARM – 4 weeks]. Heavy showers dumped up to 240 mm of rain on Uruguay and northern Argentina, but six–week moisture deficits remained near 150 mm in parts of central Argentina. The abnormally dry weather may have adversely affected the soybean crop, according to press reports. [DRY – Ending at 7 weeks].

3. Northern Scandinavia:

DRY CONDITIONS DIMINISH.

Precipitation totals generally ranged from 20 to 40 mm, providing some relief from the exceptionally dry weather of the past two months. Six–week moisture deficits declined, but some locations reported shortages of up to 70 mm since early February [DRY – Ending at 8 weeks].

4. Southern Europe:

STILL VERY WARM AND DRY.

Temperatures averaged as much as 6°C above normal as the unseasonably mild spell continued (see front cover) [WARM – 4 weeks]. Although northern Yugoslavia received 20 to 40 mm of precipitation, most of the Mediterranean Basin measured none as six–week moisture shortages grew to as large as 80 mm on Corsica and 120 mm in northern Italy (see page 2) [DRY – 6 weeks].

5. Southern Africa:

ABNORMALLY DRY WEATHER PERSISTS.

Little or no rain was reported again last week, except for 20 to 50 mm in central Mozambique and isolated sections of Zimbabwe. Six–week precipitation shortfalls were as high as 180 mm in Zimbabwe, 110 mm in Botswana, and 80 mm in Namibia [DRY – 7 weeks].

6. Madagascar:

TROPICAL CYCLONE LITANNE RAKES ISLAND.

The fourth tropical cyclone of 1994, Litanne, grazed the eastern coast of the republic, packing winds of 200 kph and peak gusts approaching 215 kph. Between 100 and 250 mm of rain fell on the central and southeastern coasts of the island in association with Litanne [Episodic Events].

7. Kazakhstan and Southwestern Russia:

COLD AIR REMAINS ENTRENCHED.

Temperatures averaged as much as 7°C below normal as lows dipped to –27°C and wind chills plummeted to –58°C at some locations. Relatively mild conditions, however, were reported in southern and eastern sections of Kazakhstan [COLD – 6 weeks].

8. Southeastern China:

WETNESS DIMINISHES.

As much as 70 mm of precipitation fell on a few locations, but most of the region received only 20 to 40 mm, allowing moisture surpluses to decrease [WET – Ending at 6 weeks].

9. Indonesia:

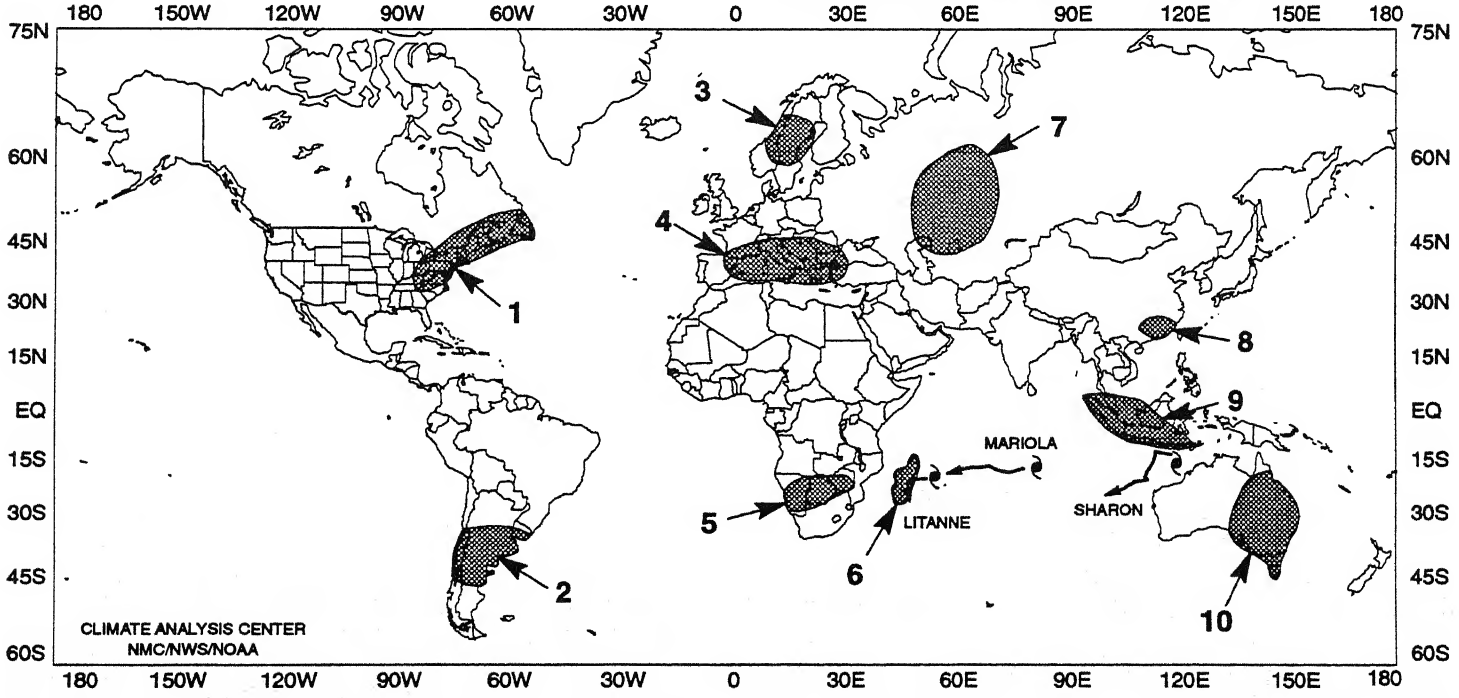
ENHANCED CONVECTIVE ACTIVITY CONTINUES.

Heavy thunderstorms again drenched the archipelago with up to 250 mm of rain falling on Celebes. Six–week rainfall surpluses ranged up to 300 mm on Sumatra and Borneo [WET – 17 weeks].

10. Eastern Australia:

COOL WEATHER PERSISTS AS RAINS EASE.

Temperatures averaged 2°C to 5°C below normal across most of the region, with departures dipping to –6°C in eastern Victoria [COLD – 4 weeks]. Little or no rain was reported, except for 20 to 30 mm along the immediate eastern coastline. Since early February, moisture surpluses swelled to as large as 190 mm along the coast, but declined somewhat in other areas [WET – Ending at 9 weeks].



EXPLANATION

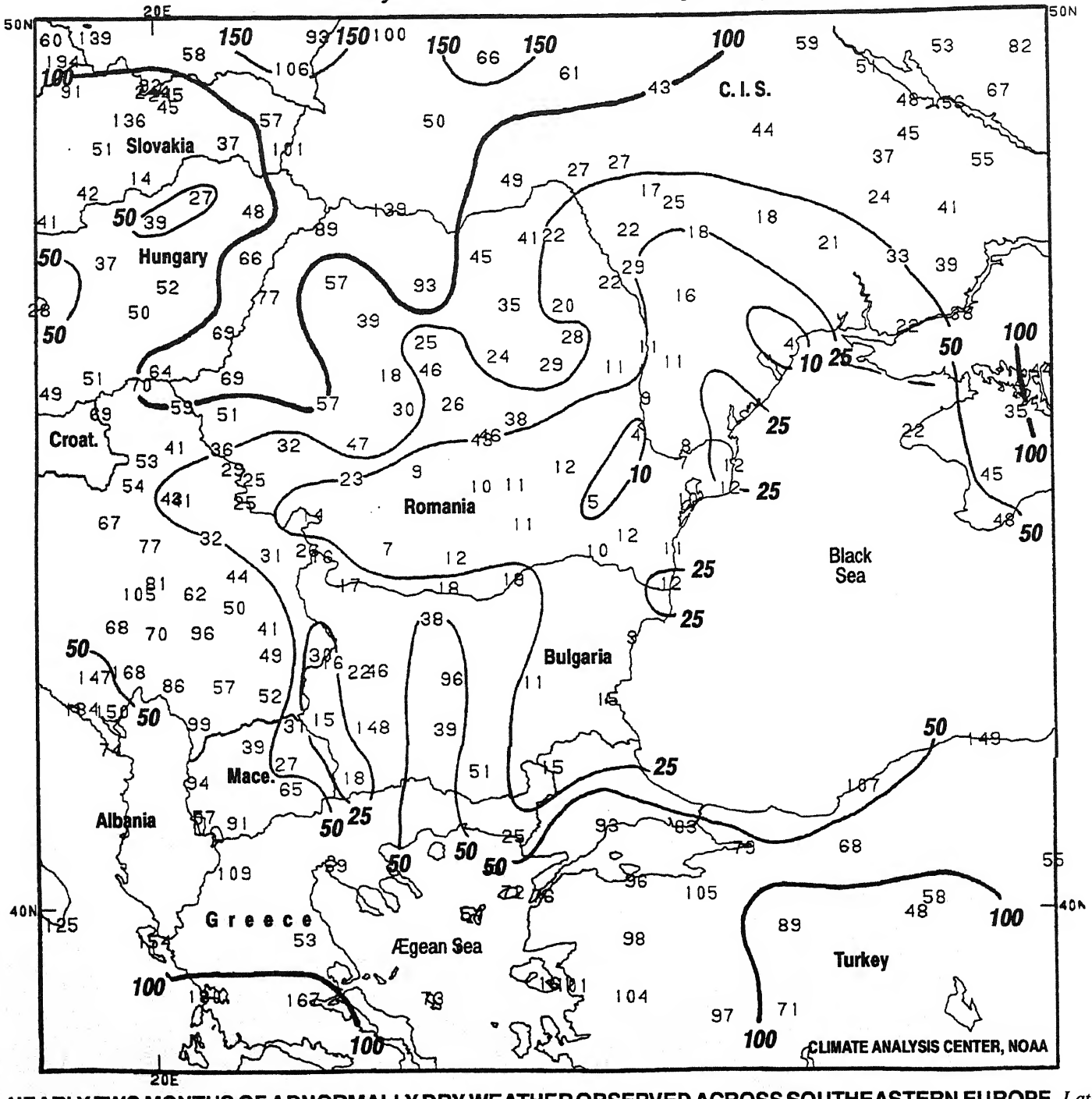
TEXT: Approximate duration of anomalies is in brackets. Precipitation amounts and temperature departures are this week's values.

MAP: Approximate locations of major anomalies and episodic events are shown. See other maps in this Bulletin for current two week temperature anomalies, four week precipitation anomalies, long–term anomalies, and other details.

GLOBAL CLIMATE HIGHLIGHTS FEATURE

PLOTTED VALUES: TOTAL PRECIPITATION (MM)
CONTOURS: PERCENT OF NORMAL PRECIPITATION

January 23 – March 20, 1994 [57 days]



NEARLY TWO MONTHS OF ABNORMALLY DRY WEATHER OBSERVED ACROSS SOUTHEASTERN EUROPE. *Late autumn and early winter precipitation brought some relief from a prolonged period of subnormal precipitation dating back to late 1991. During the last two months, however, exceptionally light precipitation was again recorded across southeastern Europe, with the eastern half of Bulgaria, extreme northeastern Greece, southern and southeastern Romania, and portions of Moldova reporting only 5 – 20 mm during the 57–day period ending March 20, 1994. These totals represent under 25% of normal for the period, and amounts of less than half of normal extend into western Crimea, central Romania, eastern Yugoslavia and Macedonia, and northern sections of Greece and Turkey. The long–term moisture budget remained unfavorably low across most of the region as a result of nearly two years of consistently subnormal precipitation from late 1991 through late 1993, but no immediately threatening adverse affects were attributed to the recent short–term dry spell.*

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF MARCH 13 – 19, 1994

The last full week of astronomical winter was marked by dry, windy, and abnormally warm weather from the Pacific Coast eastward to the Mississippi Valley. Temperatures soared into the upper seventies as far north as the northern portions of the Intermountain West, Rockies, and Great Plains, with temperatures reaching into the eighties and nineties across southern California and the central and southern Plains. Weekly departures of +12°F to +18°F were common over the northern Rockies and northern and central Plains. The unusually warm conditions spread eastward as the week progressed, with over one hundred new daily record high temperatures established from the Pacific Coast eastward to the Great Plains.

At the start of the week, a fast eastward moving–cold front spread rain and snow across the Ohio Valley, the lower Great Lakes, and New England while scattered showers covered the southeastern Plains, the middle and lower Mississippi Valley, the mid–Atlantic, and the Southeast. On Monday and Tuesday, a second cold front followed as the first one swept out to sea, generating little precipitation but ushering cooler air into the East. Meanwhile, a stationary upper–level disturbance brought several inches of rain to much of southern Texas. Mild, dry, and windy weather prevailed in the West as a large high pressure system centered over the Great Basin generated Santa Ana winds across southern California and the desert Southwest. Strong winds also buffeted Hawaii due to a large high pressure system centered north of the Islands. Wind gusts to 60 mph knocked down trees, closed tourist attractions, and caused minor structural damage and power outages, according to press reports.

During the middle of the week, the second eastern cold front pushed rapidly southeastward into the Atlantic and Gulf of Mexico, generating high wind and blanketing the Northeast with more snow. Several locations have established new cold season (September to May) snowfall records, including Binghamton, NY, State College, PA, Boston, MA, and Clarksburg, VA. During the latter part of the week, yet another frontal system swept southeastward out of the northern and central Plains. This last system brought widespread precipitation from the Great Lakes and Ohio Valley to the northern and middle Atlantic Coast and dumped heavy snow over portions of Michigan and Pennsylvania. In the West, a pair of Pacific Ocean frontal systems rapidly moved inland, with the first ushering blustery wind and moderate precipitation (snow in the higher elevations) into the Northwest and northern California on Wednesday. The second spread rain and snow from the northern Pacific Coast on Thursday southeastward to southern California, the southern Intermountain West, and the central and southern Rockies at week's end. To the north, cold air and strong winds plagued south–central Alaska, where wind chills dipped to –40°F.

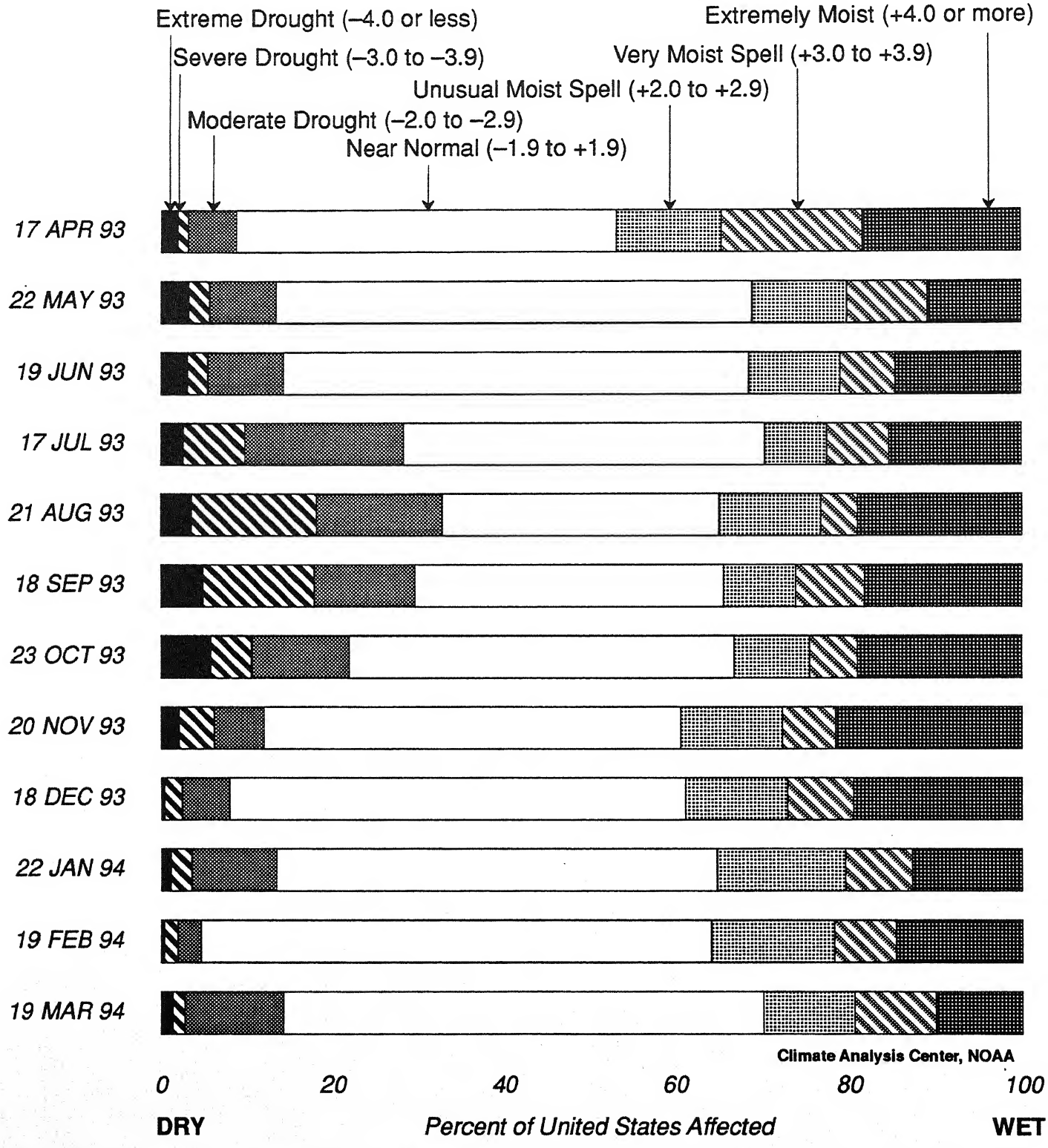
According to the River Forecast Centers, the greatest weekly precipitation totals (from two to five inches) fell on western Washington and across southern Texas. More scattered totals, exceeding two inches, fell across the Appalachians, the lower Great Lakes, and the Alaskan panhandle. Light to moderate amounts were measured in the Intermountain West, the central and southern Rockies, the upper and middle Mississippi and Ohio Valleys, New England, the mid–Atlantic, the Carolinas, Hawaii, and the remainders of the Far West, the Great Lakes, the Appalachians, and southern Alaska. Little or no precipitation was reported in the northern Rockies, all but the extreme southern portions of the Great Plains, the lower Mississippi Valley, and the remainders of the Southeast and Alaska.

Above normal temperatures prevailed over the western two–thirds of the nation and much of the Southeast and New England. Weekly departures above +6°F were observed from the interior portions of the Far West eastward to the western portions of the Mississippi Valley. Abnormally warm weather also covered southeastern sections of Alaska, with weekly departures reaching +4°F at Cordova.

In contrast, unseasonably cool weather dominated the remainder of the nation, with temperatures averaging 4°F to 6°F below normal over most of the lower Great Lakes and the central Appalachians. Cold conditions also dominated the remainder of Alaska, with weekly departures reaching –19°F at Unalakleet. Temperatures also averaged slightly below normal in Hawaii.

NORTH AMERICAN CLIMATE HIGHLIGHTS FEATURE

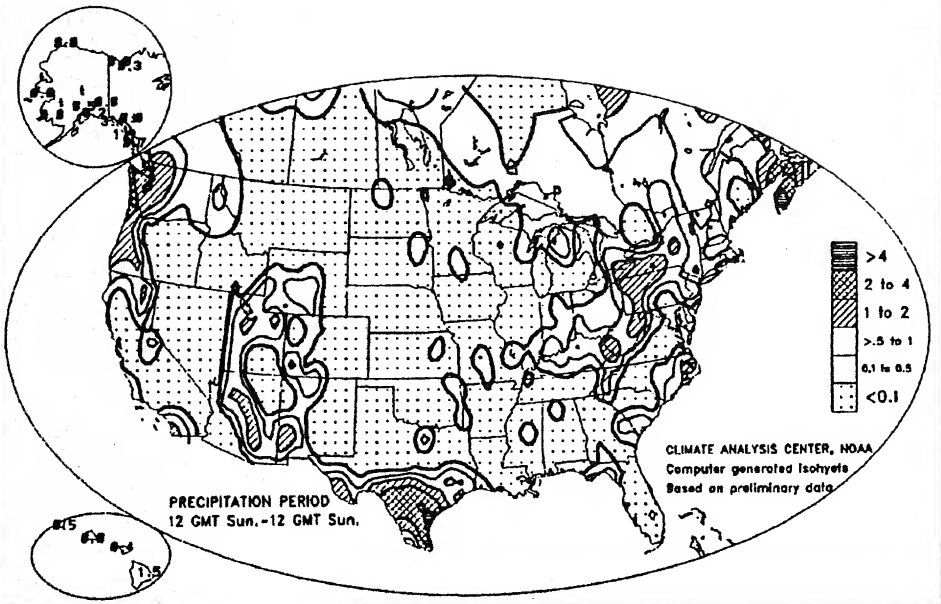
PERCENT OF UNITED STATES AFFECTED BY A WET SPELL OR DROUGHT, BASED ON THE PALMER INDEX



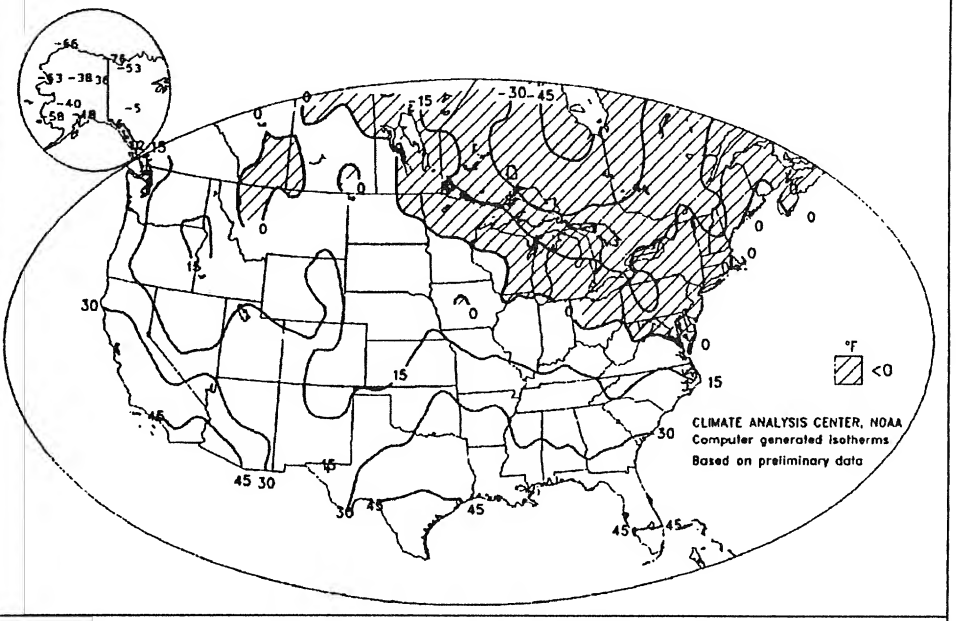
Percent of Area Affected by Wet Spells and Drought, as computed by the Climate Analysis Center. *Based on a preliminary Palmer Drought Severity Index at –4, –3, –2, +2, +3, and +4, computed by climate divisions. Dry conditions are on the left and wet conditions are on the right.*

UNITED STATES WEEKLY CLIMATE CONDITIONS *(March 13 – 19, 1994)*

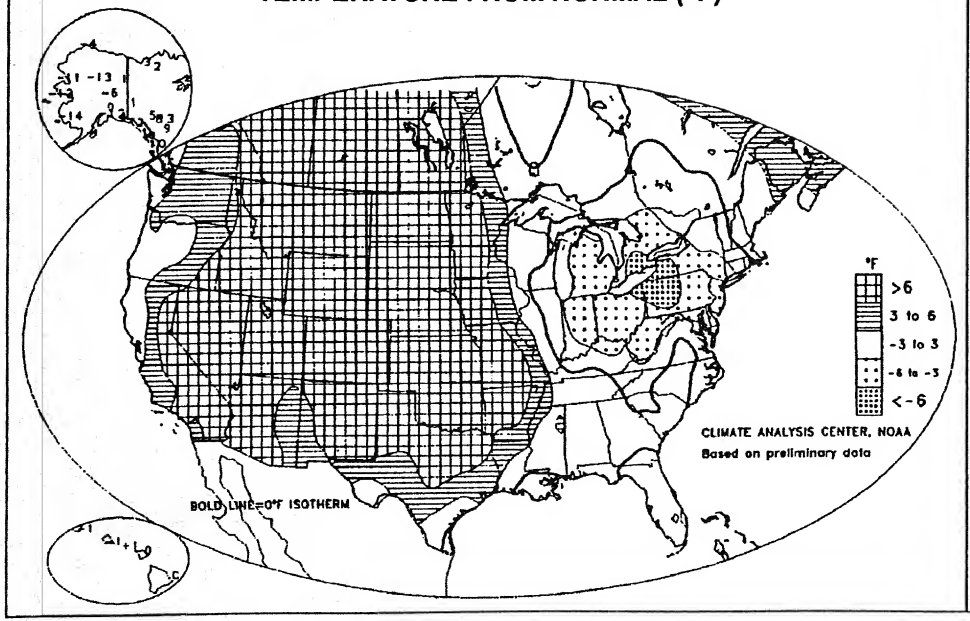
OBSERVED PRECIPITATION (INCHES)



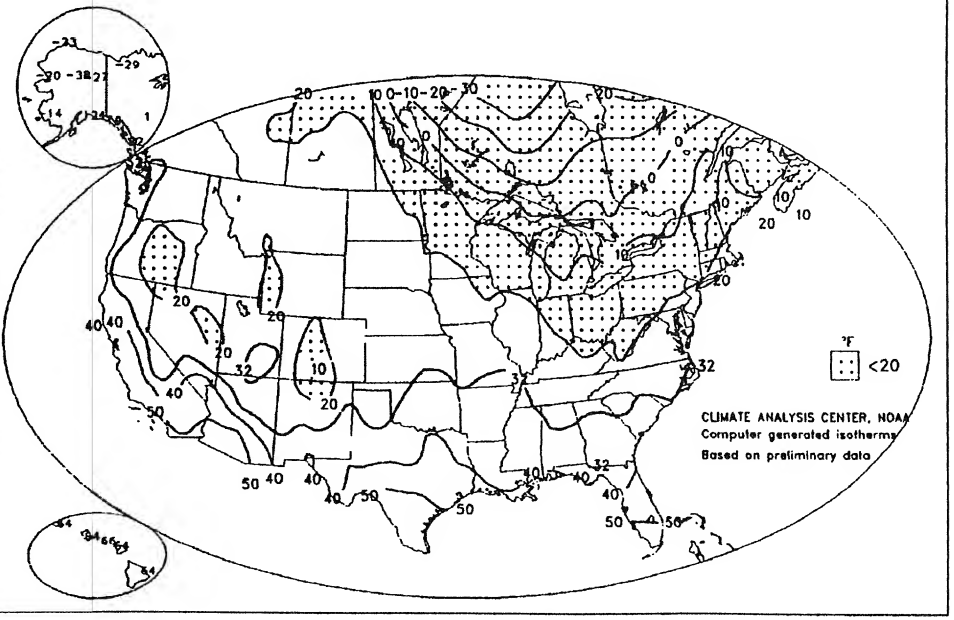
MINIMUM WIND CHILL TEMPERATURE (°F)



DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)

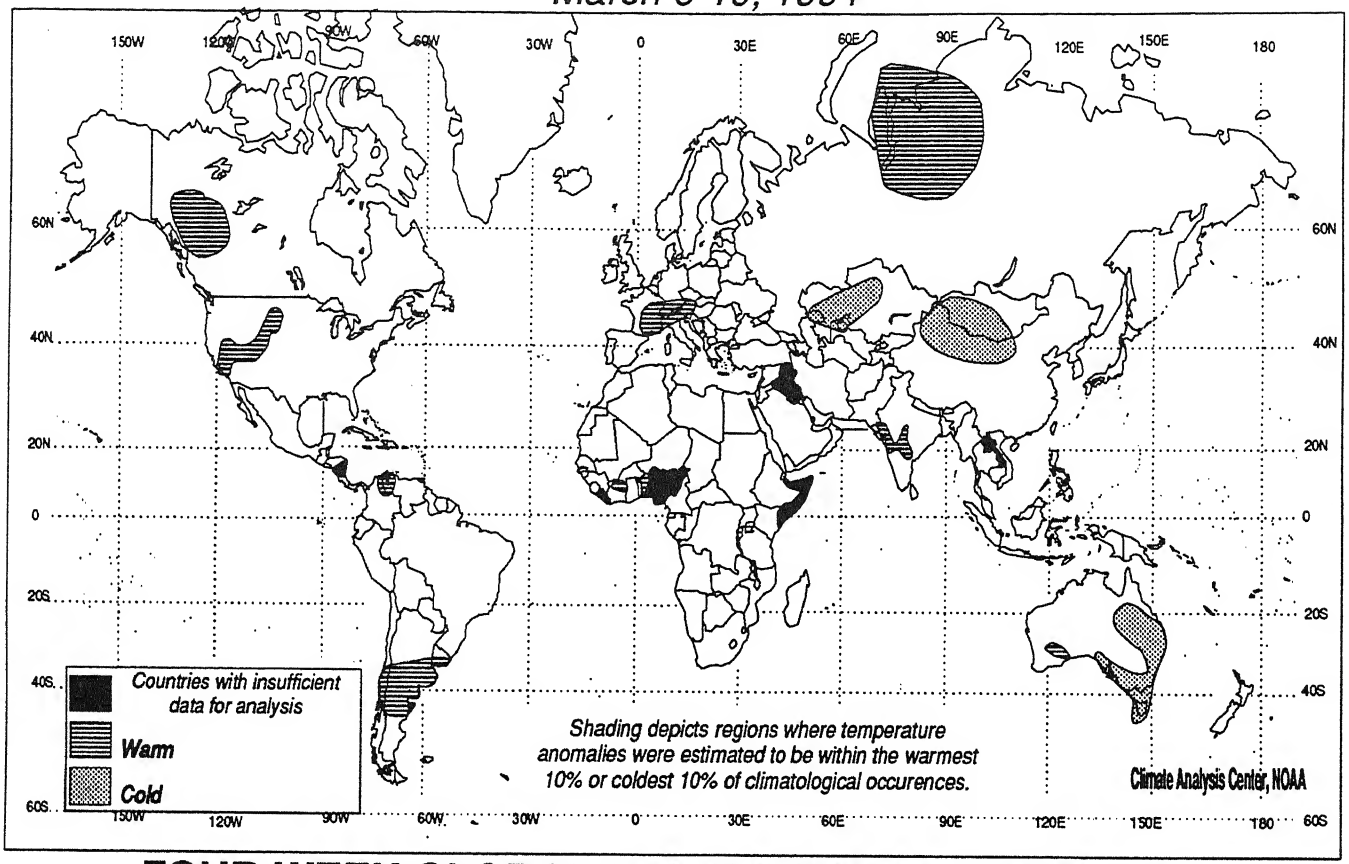


EXTREME MINIMUM TEMPERATURE (°F)



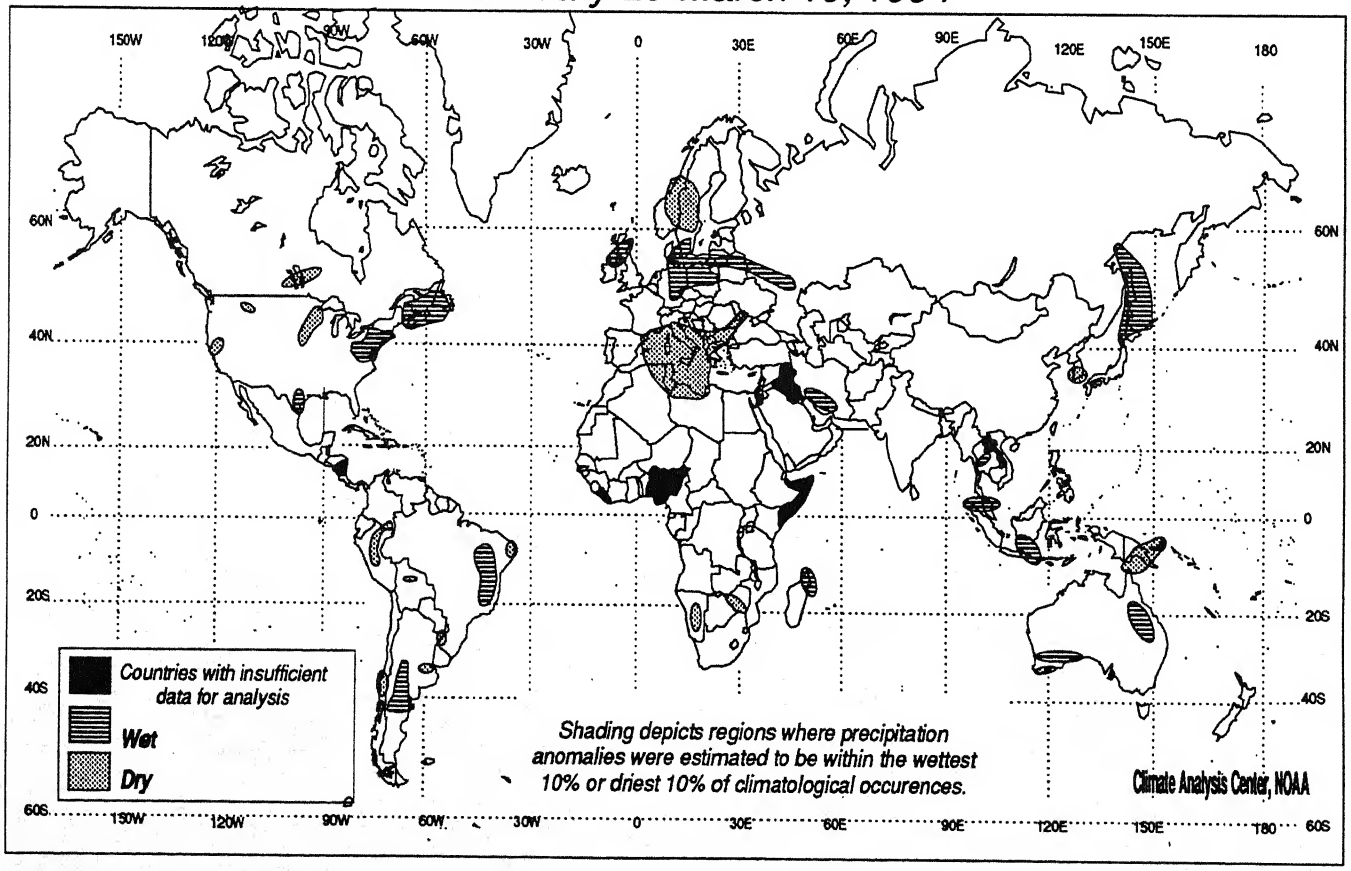
TWO-WEEK GLOBAL TEMPERATURE ANOMALIES

March 6-19, 1994



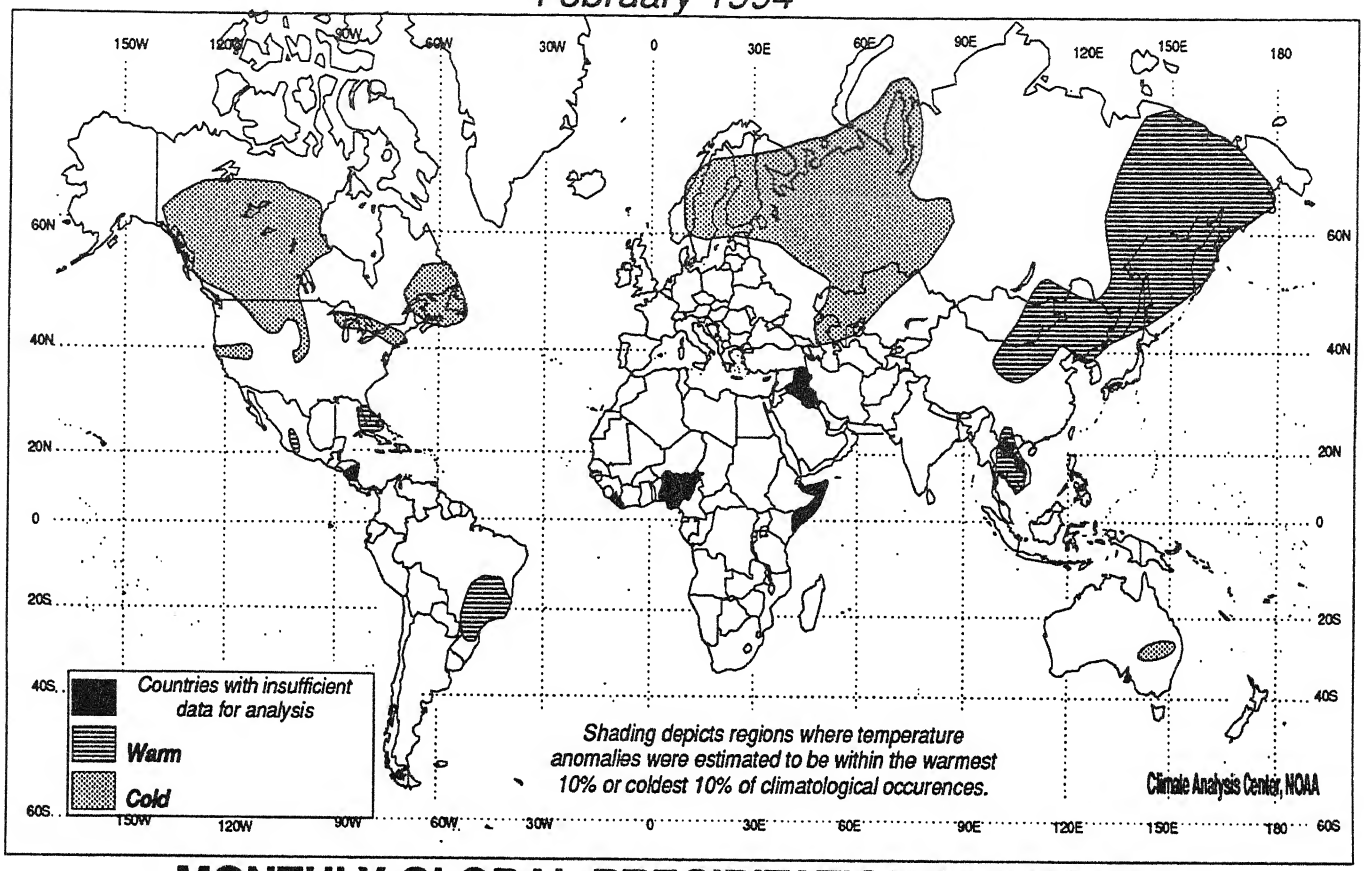
FOUR-WEEK GLOBAL PRECIPITATION ANOMALIES

February 20-March 19, 1994



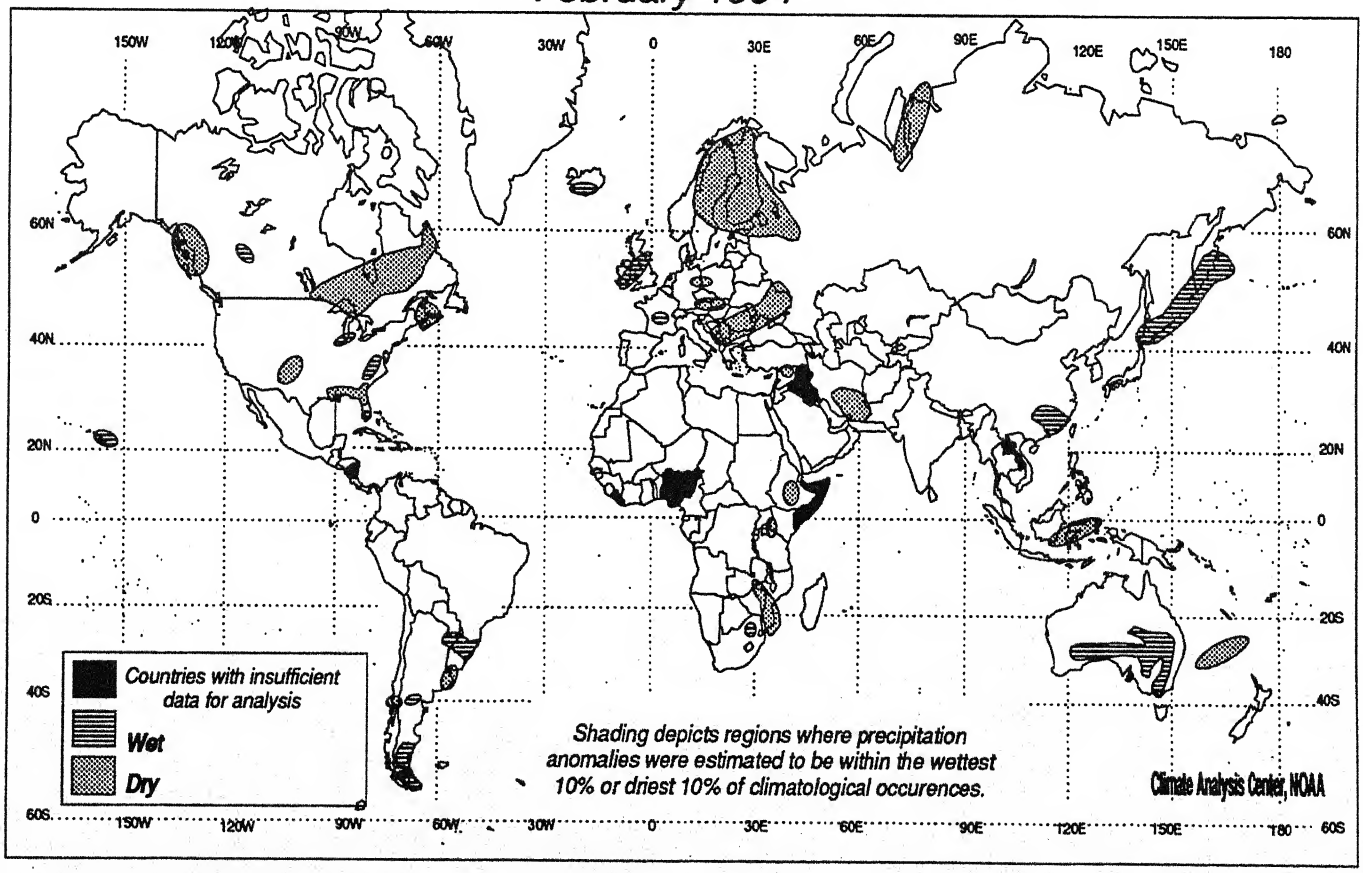
MONTHLY GLOBAL TEMPERATURE ANOMALIES

February 1994



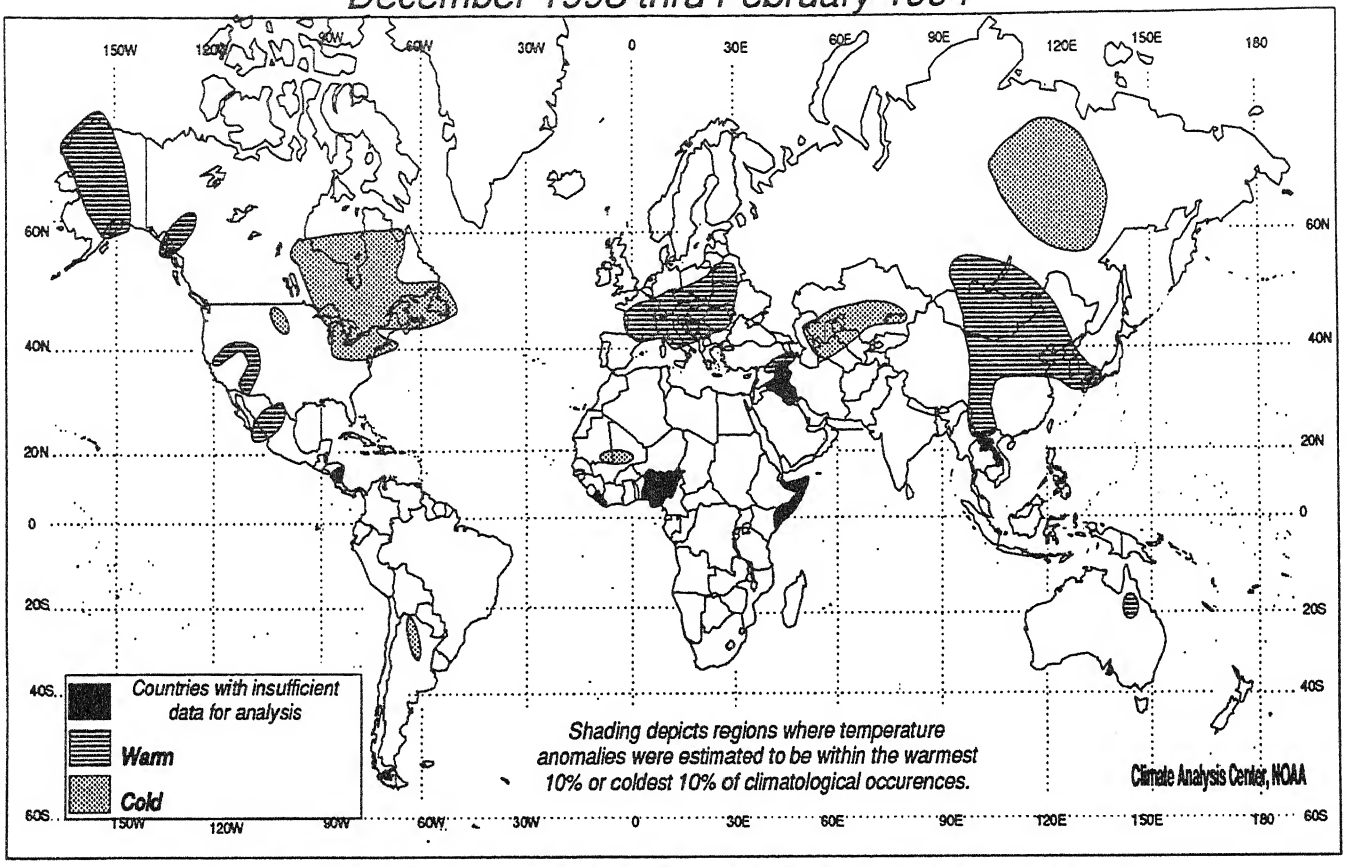
MONTHLY GLOBAL PRECIPITATION ANOMALIES

February 1994



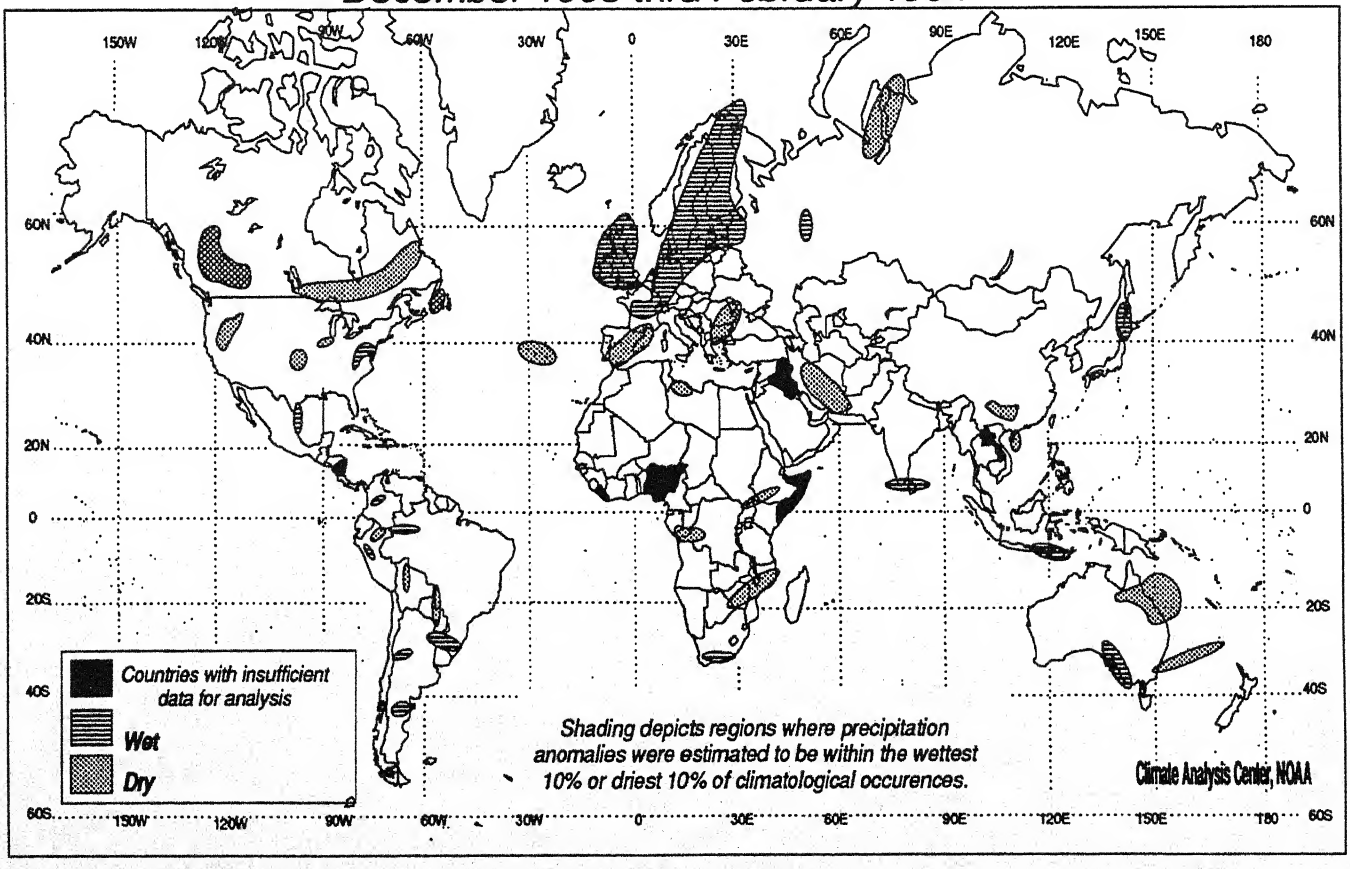
THREE-MONTH TEMPERATURE ANOMALIES

December 1993 thru February 1994



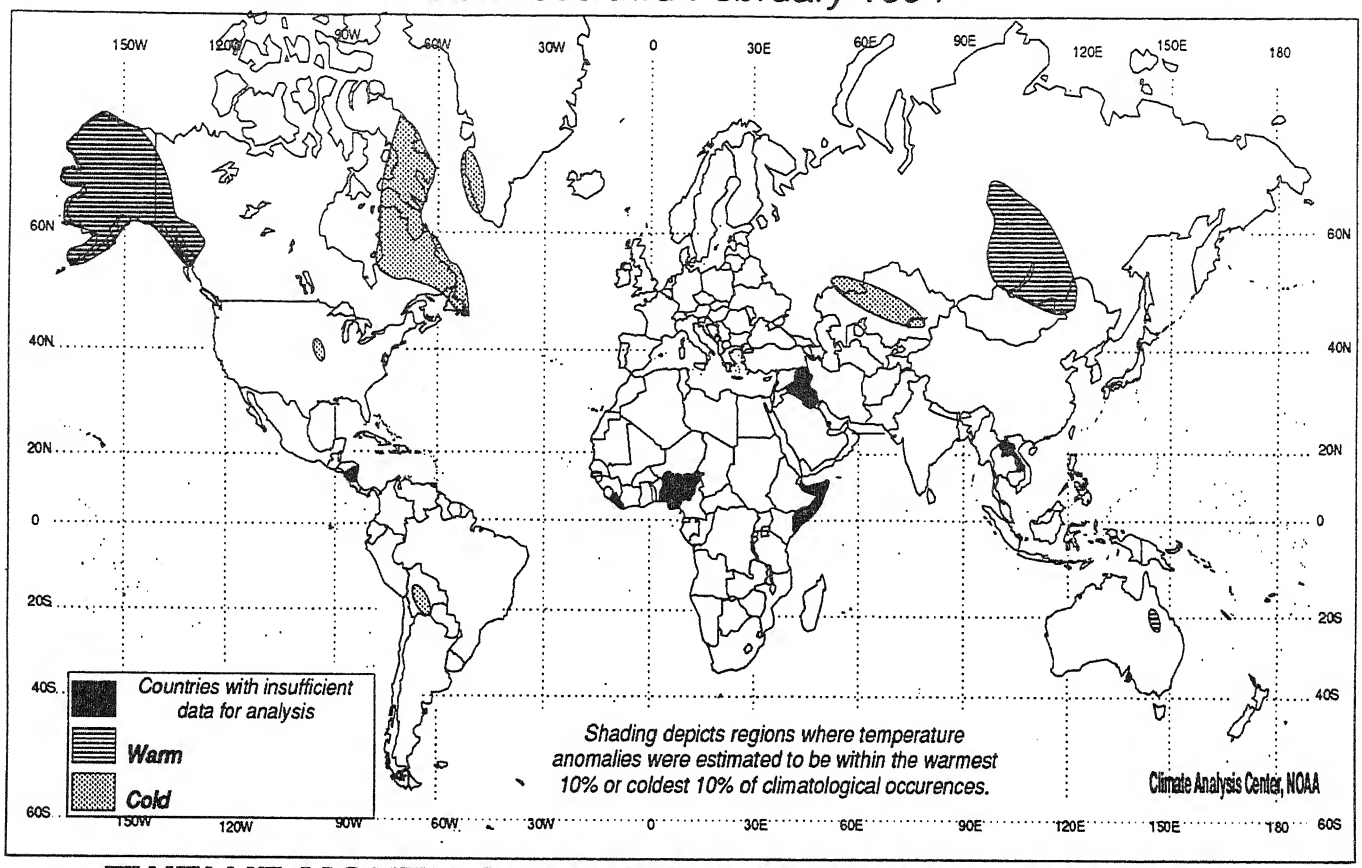
THREE-MONTH PRECIPITATION ANOMALIES

December 1993 thru February 1994



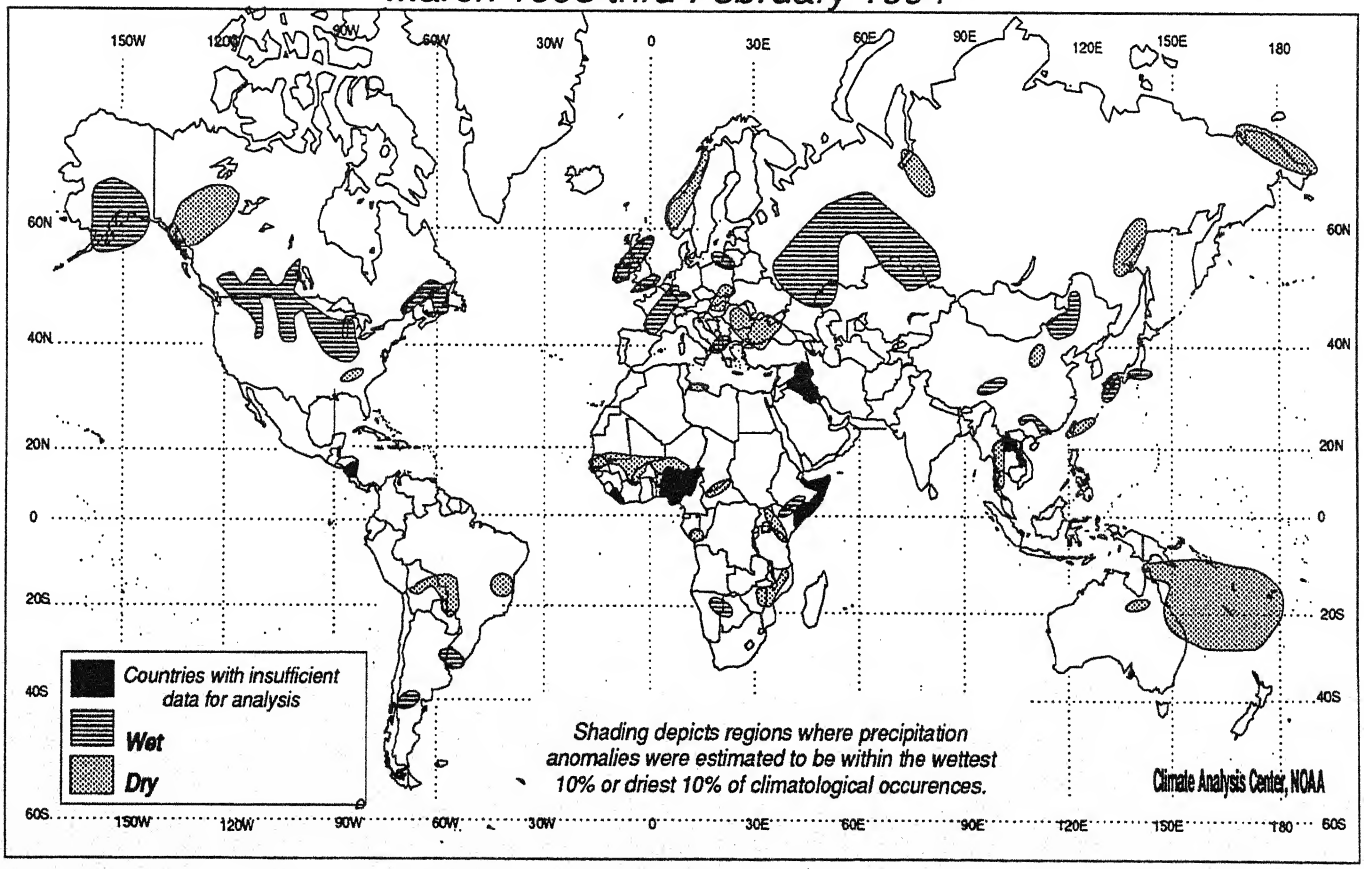
TWELVE-MONTH GLOBAL TEMPERATURE ANOMALIES

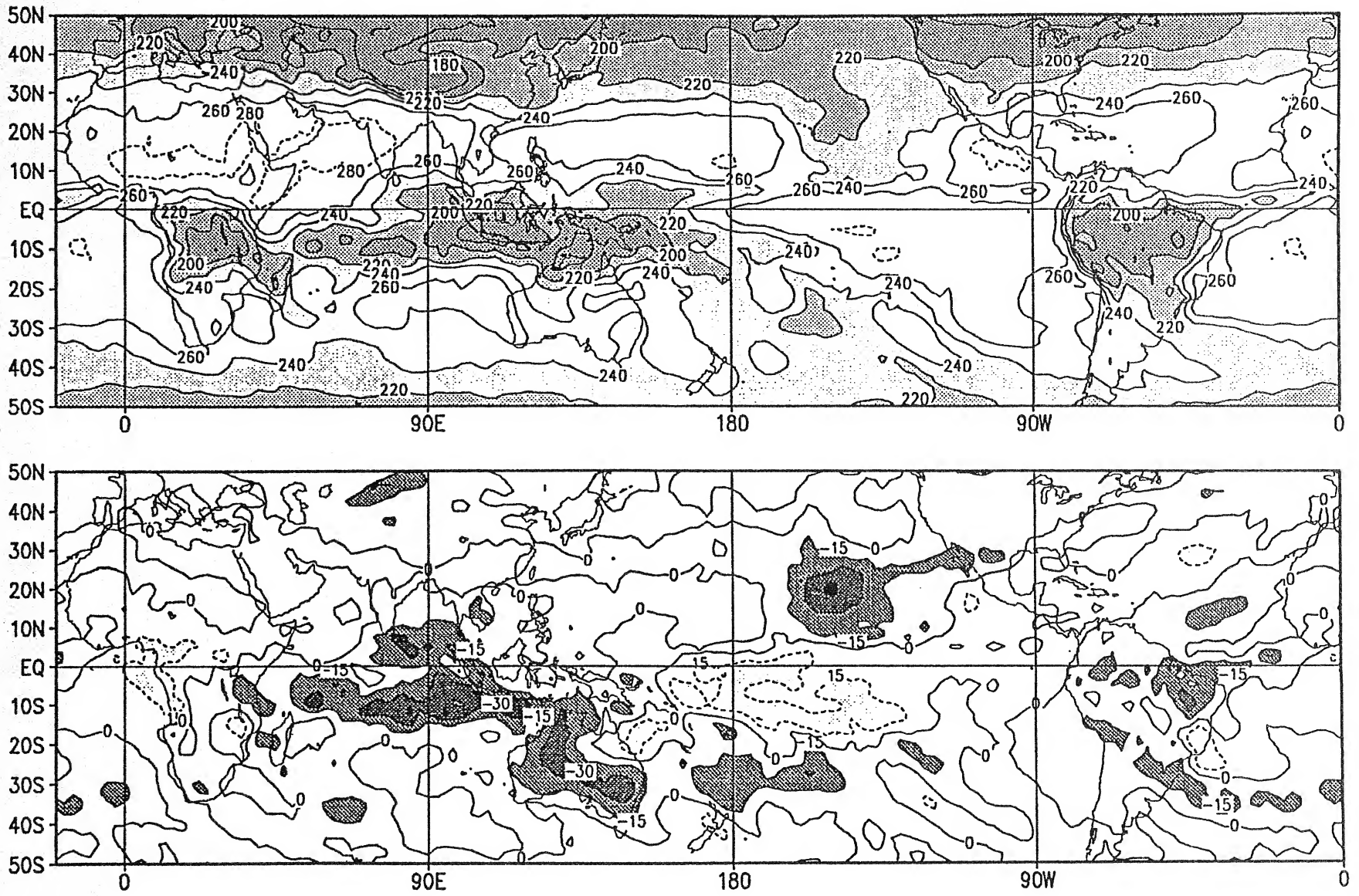
March 1993 thru February 1994



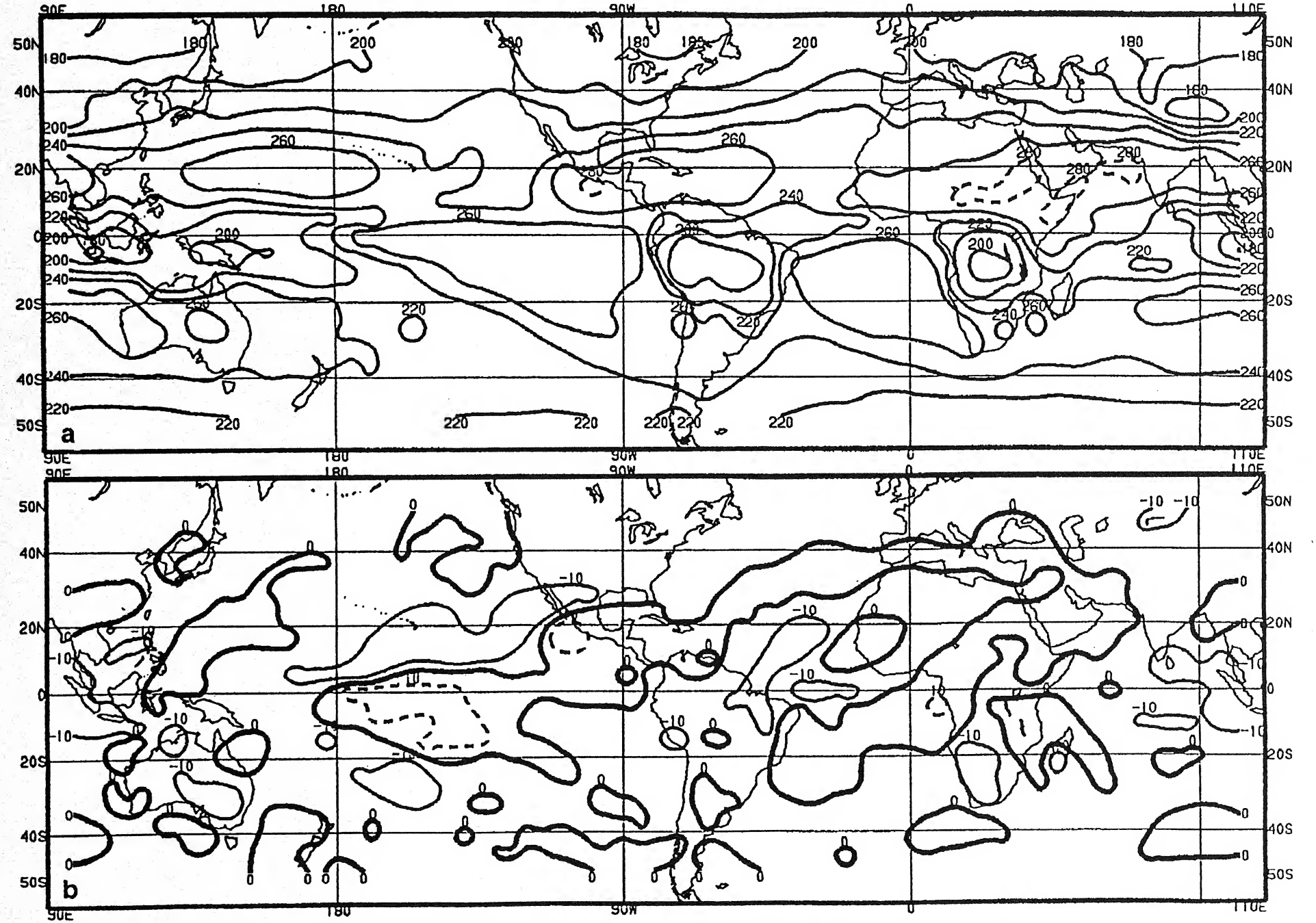
TWELVE-MONTH GLOBAL PRECIPITATION ANOMALIES

March 1993 thru February 1994





Outgoing longwave radiation, mean (top) and anomalous (bottom), for FEB 1994 (NOAA 11 AVHRR IR window channel measurements by NESDIS/SRL). Contour interval is 20 Wm^{-2}. Contours of 280 Wm^{-2} and above are dashed. Anomalies are computed as departures from the 1979-1988 base period monthly means. Anomaly contour interval 15 Wm^{-2}. Positive anomalies are dashed.



OUTGOING LONGWAVE RADIATION, MEAN (TOP) AND ANOMALOUS (BOTTOM), FOR DECEMBER 1993–FEBRUARY 1994.

NOAA 11 AVHRR IR window channel measurements by NESDIS/SRL.